Bay Area Air Quality Management District

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Proposed Amendments to BAAQMD Regulation 9 (Inorganic Gaseous Pollutants) Rule 10 (Nitrogen Oxide and Carbon Monoxide from Boilers, Steam Generators and Process Heaters in Petroleum Refineries)

Draft Staff Report

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Proposed Amendments to BAAQMD Regulation 9, Rule 10 (Nitrogen Oxide and Carbon Monoxide from Boilers, Steam Generators and Process Heaters in Petroleum Refineries)

Background

The proposed revisions to the District's Regulation 9, Rule 10 are intended to address deficiencies noted by US EPA in their limited approval/limited disapproval of the rule (66 Fed. Reg. 17078, March 29, 2001). If EPA has not fully approved the rule into the California State Implementation Plan (SIP) for the national ozone standard by October 30, 2002, the Bay Area would be subject to sanctions under the federal Clean Air Act.

EPA's partial disapproval is based on its conclusion that the rule does not specify test methods and recordkeeping requirements for determining compliance with the emission limits in the rule.

Regulation 9, Rule 10 contains two different limits for nitrogen oxide (NOx): a stringent Best Available Retrofit Control Technology (BARCT) limit required by state law, and a less stringent Reasonably Available Control Technology (RACT) limit required by federal law. Both of these NOx limits apply to the same set of combustion sources at a refinery. The District submitted the federal NOx limits (Section 9-10-303), and the small unit requirements of Section 9-10-306 to EPA for inclusion in the SIP.

The District submitted the federal RACT limits rather than the complete rule for several reasons. First, federal law only requires RACT controls, not the more stringent BARCT controls required by state law. Second, state law (Health and Safety Code section 39602) requires that the SIP contain only those provisions necessary under the federal Clean Air Act. Third, state law (Health and Safety Code sections 40920.6 and 39607.5) also requires that emission reduction credits be allowed for compliance with the BARCT limits in the rule, and, because federal credit policy is relatively inflexible, including the BARCT limits in the SIP would probably prevent the use of the credits that must be allowed under state law. Fourth, preventing the use of credits would also discourage innovative approaches to reducing NOx and would discourage early reduction of NOx.

EPA's partial disapproval is a consequence of two things: (1) the RACT limits do not include cross references to the rule's test methods and recordkeeping requirements, and (2) the SIP submittal did not include test methods and recordkeeping requirements from the rule that, by the terms of the rule, do not apply to the RACT limits. The rule was submitted to EPA in 1996 because it had

been included as a contingency measure in the District's 1994 Redesignation Request and Maintenance Plan for the National Ozone Plan. EPA's potential need to enforce the RACT limits was not foreseen at the time, since affected boilers and other sources were about to become subject to the rule's more stringent BARCT limits.

The proposed amendments are intended to correct the deficiencies cited by EPA and make the rule fully approvable into the SIP. The amendments apply the monitoring and record keeping requirements in the rule to those sources subject to the federal RACT standards in Sections 9-10-303 and 306.

Proposed Revisions

The proposed amendments to Regulation 9, Rule 10 are:

Section 9-10-502 Monitoring

Section 9-10-502 currently contains the monitoring requirements for sources that are subject to the emission standards in Section 9-10-301, 304 and 305. A reference to Section 9-10-303 will be added to this section, so that sources that are subject to Section 9-10-303 will have the same monitoring requirements as other sources. Sources that are subject to the federal NOx limit in Section 9-10-303 are also subject to more stringent NOx limits in Sections 9-10-301 and 304. Since Sections 9-10-301 and 304 are already included in the monitoring requirements, this change does not result in any additional monitoring requirements. The refineries have already submitted monitoring plans for sources subject to Section 9-10-301 and 304. It will not be necessary to submit a new monitoring plan for sources subject to Section 9-10-303 since these source are already covered by the existing monitoring plan.

9-10-504 Records

References to Section 303 and Subsection 306.2 will be added to these record keeping requirements. The section will be divided into 2 subsections: It is necessary to break the monitoring requirements into two subsections because "Small Units" that are subject to Section 9-10-306 are not subject to the same degree of record keeping as other sources.

Subsection 9-10-504.1 includes the existing record keeping requirements for sources that are subject to the emission limits in Section 9-10-301, 304 and 305. A reference to Section 9-10-303 will be added to this subsection. Subsections 9-10-504.1.5, 504.1.6 and 504.1.7 are new requirements to keep a list of affected sources, total NOx emissions and heat input on a daily basis, start-up and shutdown records. These additional records are necessary to demonstrate compliance with the various emission standards.

Subsection 9-10-504.2 will be added to include tune-up records for "Small Units" that are subject to Section 9-10-306.2.

9-10-505 Reporting Requirements

References to Sections 303 and 306 will be added to the reporting requirements in Section 9-10-505. Per Section 9-10-505.1, the owner/operator will be required to submit a written report to the APCO within 96 hours of a violation of Section 9-10-303 or 306.

9-10-601 Determination of Nitrogen Oxides

A reference to Section 303 will be added to Section 9-10-601. As a result, the owner/operator will have to use a continuous emission monitoring system (CEMS) or an equivalent verification system to show compliance with the federal NOx limit in Section 9-10-303. This will not impose any additional monitoring burden on the refineries. The sources that are subject to Section 9-10-303 are already subject to the same monitoring requirements, because these sources are also subject to Sections 9-10-301 and 304. In addition, the reference to source test method ST-13B in the District Manual of Procedures will be removed. This is because that source test method has been deleted from the Manual of Procedures.

Socioeconomic Impacts

Section 40728.5 of the California Health and Safety Code (H&SC) requires districts to assess the socioeconomic impacts of amendments to regulations that, "...will significantly affect air quality or emissions limitations." This regulatory proposal does not fall within the scope of an amendment that significantly affects air quality or emissions limitations. The proposed amendments do not impose any additional emission standards or monitoring requirements on combustion sources at refineries. The amendments clarify that the existing monitoring and record keeping contained in Regulation 9, Rule 10 also applies to sources that are subject to the federal NOx standard in Section 9-10-303. Sources that are subject to Section 9-10-303 are also subject to Sections 9-10-301 and 304. Since monitoring and record keeping is already required for sources that are subject to Section 9-10-301 and 304, inclusion of Section 9-10-303 sources does not impose monitoring and record keeping requirements on any sources that are not already subject to monitoring and record keeping.

Under H&SC 40920.6, the District is required to perform an incremental cost analysis for a proposed rule. To perform this analysis, the District must (1) identify one or more control options achieving the emission reduction objectives for the proposed rule, (2) determine the cost effectiveness for each option, and (3) calculate the incremental cost effectiveness for each option. To determine incremental costs, the District must "calculate the difference in the dollar costs

divided by the difference in the emission reduction potentials between each progressively more stringent potential control option as compared to the next less expensive control option." This section of the Health and Safety Code is not applicable to this amendment. There are no identifiable costs associated with this project as there is no change in the regulatory standards or emission limitations.

Section 40727.2 of the Health and Safety Code imposes requirements on the adoption, amendment, or repeal of air district regulations. The law requires a district to identify existing federal and district air pollution control requirements for the equipment or source type affected by the proposed change in district rules. The district must then note any differences between these existing requirements and the requirements imposed by the proposed change. Where the district proposal does not impose a new standard, make an existing standard more stringent, or impose new or more stringent administrative requirements, the district may simply note this fact and avoid the analysis otherwise required by the bill.

These proposed amendments do not impose any different standards.

Environmental Impacts

The District has determined that these amendments to Regulation 9; Rule 10 are exempt from provisions of the California Environmental Quality Act pursuant to State CEQA Guidelines, Section 15061, subd. (b)(3). The amendments are purely administrative in nature and are intended to correct oversights in the rule. The amendments do not affect emission standards or rates. It can be seen with certainty that this rulemaking project will have no environmental impacts and is therefore exempt under Guidelines Section 15061, subd (b)(3).